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Proceedings of the Society

JULY 21, 1931.

The President (Dr. Charles Anderson) occupied the chair. The following nominations for membership were presented: Adolphus Peter Elkin, Keith Alfred Hindwood, Francis Edgar Williams, James Alexander Ogilvie. The President announced that His Excellency Sir J. Hubert P. Murray,

Lieutenant-Governor of Papua, had applied for membership, and the Committee had decided to ask him to accept the position of Vice-Patron.

The lecturer for the evening was Mr. C. Price Conigrave, who spoke on "Wanderings in Wild Australia." After announcing that for fourteen

years he was attached to the West Australian Museum, Mr. Conigrave showed some fine lantern pictures of topographical interest, taken on a journey from Fremantle to the Kimberley Division, when in charge of an expedition in 1911-1912, which had for its object the mapping out of the area between Cambridge and Admiralty Gulfs. He stated that Kimberley was a most interesting region because, at the time visited, many of the natives were uninfluenced by contact with the white man. In passing, it was pointed out that the coast of Western Australia was redolent with names given by Dutch navigators. Also, it was the only region in Australia where cave paintings of an intensely human interest were to be found. These were of the type discovered by Sir George Grey in the early days of colonization, and are very puzzling, many conjectures being made as to their origin. The lecturer quoted Prof. John Campbell, who interpreted some characters depicted on the forehead band of one of these human figures as recording the visit of 62 Japanese mariners during the tenth or eleventh century A.D. If this interpretation were accepted, it would antedate the advent of the European navigators by several centuries. The lecturer then proceeded to describe the different methods used by the natives for catching fish, namely, stupefying by means of the freshwater mangrove; rolling long masses of tangled spinifex grass in the shallows; and by means of the stone causeway, or weir, seen on the Durack River.

Mr. Conigrave next described Bathurst and Melville Islands, the natives and the first attempt at settlement by Gordon Bremer at Raffles Bay in 1824, and later at Port Essington. The project was finally abandoned in

1849. The lecturer then described the mainland territory known as Arnhem Land, the last stronghold of the "myall" Aborigines. The Daly River was referred to as the boundary of the Brinken tribe, and brief mention was made of the Victoria River Downs Cattle Station, covering an area of 12,000 square miles, the largest ranch in the world. The lecturer spoke in glowing terms of the provision made by the Port Darwin authorities for the housing and medical treatment of the natives. Pictures of the Aborigines typical of the different areas were interspersed throughout the lecture, depicting the native at warfare, work or play. Such local features as jungle lands, magnetic anthills, cabbage palms and banyan groves, caverns with hand-marks, and "burial" platforms were also shown. Several pictures of grave posts and funeral corroborees were projected and described. Brief discussion followed and, after the lecture, a hearty vote of thanks was accorded Mr. Conigrave.

Previous to the lecture, the following exhibits were described: By Mr. B. L. Hornshaw, human remains and stone implements from Port Hacking. By Mr. M. S. Stanley, an aboriginal axe-head found at a depth of 17 feet at the S.E. corner of William and Riley Streets, Sydney. By Mr. R. Turner, axe-heads and flakes chiefly from the Manly district. By Mr. W. W. Thorpe, massive flaked implements and chipped-back instruments, approaching the Victorian "crescent," from a new locality near Bodalla, N.S.W., discovered by the Rev. A. J. Barrett. By Mr. R. H. Goddard, a wrapped human clavicle—probably an object of magic—from Flora Valley, Kimberley, and two stone pounders from the Bogan River, N.S.W.

AUGUST 18, 1931.

In the absence of the President and Vice-President, Mr. R. H. Goddard pre-

sided. The following candidates were then elected: Sir John Hubert Plunkett

Murray, K.C.M.G., M.A. (Oxon), as Vice-Patron of the Society; Francis Edgar Williams, M.A., as corresponding member; Dr. Adolphus Peter Elkin, M.A., Dr. Jas. Alexander Ogilvie and Mr. Keith Alfred Hindwood as ordinary members. The question of an excursion on the 29th inst., under the leadership of Mr. W. J. Walton was considered and finalized. The meeting then resolved itself into a "Members' and Exhibition Night."

Mr. K. Kennedy was first called upon. He briefly described some weapons and implements he had collected when in Fiji, interspersing his remarks with touches of folk-lore, and incidental legends concerning the type of weapons exhibited. The custom of *yagona* drinking, the importance of the *tambua* or whale tooth in Fijian society, and several other matters were next reviewed.

Mr. B. L. Hornshaw followed with a description of stone implements from Tasmania, Wellington Caves, N.S.W., and Mt. William, Victoria. Relics from

the late Buck Billy, King of Coolan-gatta Tribe, a hammer-stone from Victoria, and a toothless skull from Edie Creek, Mandated Territory, with two or three other items, completed the exhibit.

Mr. R. Turner then described the finding of some trimmed glass fragments of the transitional period at French's Forest, which was followed by a general summary regarding the bull-roarer, its origin, distribution and variation.

A short paper, compiled by Mr. K. M. Cobb, was read by Mr. Kennedy. This gave information regarding the occurrence of stone implements in the Paroo River district, which should prove useful to any member visiting that area.

Mr. W. W. Thorpe gave a brief historical summary of stone fish-hook files formerly used by the Aborigines, and explained the different shapes, materials and geographical ranges on the coast of New South Wales, and the analogous culture in Queensland.

SEPTEMBER 15, 1931.

In the absence of the President, the chair was occupied by Dr. Raymond Firth. After the minutes of the previous meeting were read and confirmed, the following candidates were duly elected: Messrs. Henry Field, M.A. (Oxon), Philip Sydney Whelan, John Chambers Eldridge, M.H.R. The following nominations for membership were submitted: Messrs. Leo. Austen, A.R.M. (for corresponding membership), Robert Arthur Kirkwood, R.A.N., George Ernest Archer Russell, F.R.A.I., F.C.I. (Eng.), and Burt Henning Whittle.

The Honorary Secretary announced that situated in the Ulladulla district, which he had visited recently, was an extensive rock shelter containing occupational *débris* and such implements

that had been unearthed were intimately comparable with Tasmanian flake work. It was proposed that the Society undertake the work of excavating this site under the general supervision of the proposer and Mr. Keith Kennedy; the material found to become the property of the Australian Museum, and the information gained to be used by the Society. A resolution embodying the details of this proposal was placed before the meeting and carried unanimously.

The Chairman then called upon Mr. Leo. Austen, A.R.M., of Papua, to deliver his lecture entitled: "Daily Life of the Turama People—A Head-hunting Papuan Tribe." The lecturer began his discourse by describing the political divisions of New Guinea and the

peculiar geographical features of the Delta Division generally. This was followed by a summary of the truly Papuan tribes inhabiting this region, the range of these peoples and their lingual affinities. The lecturer explained that there are three distinct groups, one of which, the Kiwai people, possess a pronounced Semitic caste of features. Pictures of the Delta region subjected to a periodical tidal bore were projected. The lecturer described in a painstaking manner the style of native architecture and the materials used in the construction of the long communal houses, and the domestic dwellings. Mr. Austen pointed out that this type of structure was necessary, on account of the heavy rainfall experienced in these parts. The observance of many ceremonies occupied a considerable portion of the life of these people, and it was in the communal houses that dances and other ceremonial activities were conducted.

It was pointed out that sago formed the staple diet of these people, and the preparation of this commodity by the womenfolk was described and illustrated. The useful hours of the adult males consisted for the most part in making canoes and arrows, hunting, and the protection of the women. Some excellent pictures of dug-out canoes were shown, and their peculiarities and methods of propulsion were admirably described. An extended account of the betrothal and initiation ceremonies followed. These ceremonies are complicated, seclusion of the neophytes being a feature of the rites, which were finalized when he signified his fitness to enter the third degree by killing a wild pig. The last stage in the elevation to manhood was consummated when the candidate killed a man. In conclusion, brief mention was made of the native songs, the words in all cases having no relation to the matter in hand.

OCTOBER 20, 1931.

This was the Annual General Meeting. The President (Dr. Chas. Anderson) occupied the chair. The following candidates were elected: Mr. Leo. Austen, A.R.M., of Papua, as corresponding members; Messrs. Robt. A. Kirkwood, G. E. Archer Russell, Burt Henning Whittle, as ordinary members. The nomination of Mr. W. H. P. Kinsela was presented. The President then called for nominations for the Council. As none were presented, the Chairman announced that the standing offices automatically continued for the ensuing year. Two notices of motion affecting the constitution were then brought forward. The first by Dr. Raymond Firth—that an alteration be made in the constitution, permitting University students to membership at a reduced rate, and subject to the discretion of the Council; the second

by Mr. R. Goddard—that an alteration be made in the constitution which will make it possible to increase the personnel of the Council to ten instead of eight as at present constituted.

The President called upon Mr. Kennedy to give a brief *résumé* of the excavation of a rock shelter at Lake Burrill, undertaken by the Society.

Mr. Thorpe gave a brief summary of events leading up to the formation of the expedition and some of the results obtained.

The Chairman then proceeded to deliver his Presidential Address entitled: "The Ancestry of Modern Man." The position of man in the animal kingdom amongst the primates, and what he had lost physically by the acquisition of increased mental capacity were graphically described.

The opinion of several experts regarding man's ancestry, not at all in agreement, were quoted, but the consensus of opinion seemed that man took his rise with the apes, from a common ancestor, whose origin, geologically speaking, is more or less obscure. The development of the faculty of speech, modifications in the teeth, erect attitude and the acquisition of the chin process were next reviewed. The lec-

turer then proceeded to describe the different types of "ape-men" and early men, such as Piltdown, Heidelberg and the Neanderthalers. Several lantern slides were shown, and a series of casts of fossil relics was exhibited.

At the close of the address the office of President was conferred on the new Chairman (Dr. Raymond Firth), who proposed a vote of thanks to Dr. Anderson for his able discourse.

A Rock Shelter at Lake Burrill, N. S. Wales

(By W. W. THORPE.)

DURING January, 1930, Messrs. J. S. Rolfe and F. D. McCarthy presented to the Australian Museum several stone artefacts which they had unearthed in a rock shelter near Lake Burrill. Beyond noting that these were very crude in outline, they aroused no special interest. During May of the same year, Mr. J. S. Falkinder, of the Society, directed our attention to the Tasmanoidal technique of some of the flakework occurring at Murrumurung, situated about twelve miles south of Lake Burrill; but it was not until June that Mr. Carlyle Greenwell submitted to us an undoubted Tasmanoid from the first-named site. From then onwards, the interest in this spot increased, until, at a general meeting of the Society held on September 15th last, it was resolved that the site be excavated. This rock shelter is situated in a small valley which terminates on Ireland's Bay, southern shore of Lake Burrill (Section 81, Parish of Woodburn, County of St. Vincent, Land District of Milton). The shelter is formed by a large projecting ledge of sandstone from the Upper Marine Series of the Permo-Carboniferous System. It is the largest recess of this kind that has come under our notice, having a length of one hundred and thirty-nine

feet. Its height varies from thirteen feet four and a half inches to eight feet eleven and a half inches, graduating down to two feet at the rear. Its greatest depth from the outer margin to where the back wall meets the ground is forty-four feet. The outlook commands a view of the lake, and the faces the north-east, so the trend of the cave is south-east to north-west.

The floor of this extensive area is practically one large midden, consisting chiefly of wood ash, broken shells mixed with sand from the ceiling and walls and alluvial earth washed in from outside. In the centre, the occupational *débris* was eighteen inches deep: at the north-west end it reached a maximum of three feet two inches. We were informed by the present owner of the land (Mr. James Jonas) that he had removed a quantity of the midden *débris* for his garden and orchard, so probably the original depth all over was in the region of three feet.

Inside the shelter the midden was exposed; along the entrance it was covered with a few inches of alluvium.

Beneath the midden proper we found sand averaging three feet in depth, and beneath this was the sandstone floor or bottom. This sand was obviously derived by erosion from the interior.

This denudation still continues. The midden was found to have no definite break in its formation, which indicated that occupation had been continuous. If the shelter had been occupied and then abandoned for any considerable length of time, there would have been a layer or series of layers of sand, or alluvium, between the deposits.

face had been removed, the rest was not disturbed. Except for limited excavations made by the late Robert Etheridge and W. R. Harper, this undertaking is the first in New South Wales of any magnitude carried out in a scientific manner. Upwards of thirty tons of material were removed, sieved through a half inch screen, circumstances often



The Rock Shelter at Lake Burrill excavated by the Society.

For the purpose of study we divided the deposit into blocks, and each block into arbitrary layers which we called stratum A and stratum B. They were not strata in the exact sense, but the term is convenient for descriptive purposes. The reason for this division was to find out whether the earlier occupants of the shelter had the same lithic culture as those who lived there at a later period. Our visits to other middens, notably those on the sea-board, have been merely gathering expeditions, for places like Quibray or Bellambi have been disintegrated by the elements, and the material in them, of interest in a way, is so mixed up as to be of little value for precise scientific purposes, such as for ascertaining when the implements were used, or if they had any evolutionary development. The midden at Burrill, however, was *in situ*, and, although some of its sur-

making it necessary to handle it two or three times.

The organisers were ably assisted with manual help from available members of the Society. Two sympathizers helped with donations which were applied to the employment of labour.

On September 24th, Messrs. Keith Kennedy, F. G. Goddard, G. H. Palmer, Wallace Thorpe and the writer set out from Sydney in two cars. We were met at Lake Burrill by Mr. A. E. Ivatt, who had arrived the previous day. It being near nightfall, little was done beyond unpacking our equipment and arranging sleeping quarters in the cave. The next day was devoted to clearing undergrowth from the mouth of the shelter, allowing light to enter, and access from the front. It took the party nearly the whole day to remove the brambles, creepers, ferns *et cetera*.

A start was then made to cut out, sieve and remove the contents of a trench four feet wide across the widest part, from the outer margin to the deepest recess. This trench measured forty-four feet, and two feet deep. This procedure served a twofold purpose. We were able to ascertain the depth of the deposit, and its removal saved the added labour of handling it more than once. The heaps shown in the illustration came out of this transverse trench. After two days of arduous effort, we lost the services of Messrs. Ivatt and Palmer, who had to return to town. One of us then plotted out the different sections. Each section was removed and treated before another was begun. Any object that looked siliceous, other than mere fragments of sandstone, was carefully watched for and saved. The results from each section were assembled and labelled stratum A or stratum B. Samples of food rejects, such as bones and shells, were similarly considered. Mr. Greenwell and Mrs. and Mr. Pincombe

arrived at the end of the first week, the former staying two days, and taking back with him Mr. F. G. Goddard and about a half hundred-weight of specimens. Mrs. and Mr. Pincombe were able to stay on until the completion of the work. During the fifteen days the main party were camped in the shelter much rain fell. This did not interfere with the progress of the work or the comfort of the occupants. All the time the fire was kept burning. Camp cooking was done the first week by Mr. F. G. Goddard, who, as an old bushman with versatile accomplishments, was a tower of strength to the workers. Latterly, Mrs. Pincombe served in a like capacity, while her genial husband did his share of the excavating work.

A second box of specimens was despatched by steamer from Ulladulla at the termination of the work.

Owing to MANKIND going to press, a pronouncement as to the results must await the next issue.

A Pilgrimage to Kendall's Rock and Somersby Falls

(By W. J. WALTON.)

"Secret hollows dear to noontide dew."—KENDALL.

THE new northern highway connecting Sydney with Newcastle is daily traversed by large numbers of people. For scenic beauty the road compares favourably with any other in the State, and it has a wonderful panorama of virgin bush, mountain, river, and sea. It is a land of delight—of ever changing views, unsurpassingly fair. To the botanist it is a "garden of the gods." Gosford is the hub of a wonderful district, for, from the township, radiate roads to beauty spots, gullies and waterfalls, orange groves, beaches and lakes, with all the facilities and conveniences of a modern town. It is

an historic place, settled very early in the old colonial days. If the Parramatta district points with pride to the grower of the first grain, Gosford can claim to be the first place in Australia to grow sugar—by a Mr. Scott, who died at the ripe age of 105 years. His last resting place may be seen at Point Frederick. The sugar was grown at Tascott on land still in the possession of his descendants. Hargraves—the discoverer of gold in Australia—once lived in the district. In those early days the first white settlers found a large native population; many of their old ceremony grounds still exist. Some

seventy years ago the blacks had dwindled down to a little band of eight or nine. The story goes, as told by a very old settler, that about that time an Aborigine stole a bottle of rum. The black, who had taken his prize into the bush, was pursued, and its incensed owner, finding him under the influence of the spirit, dropped a big rock on his head. The story is mentioned here because it is said the body was placed in a cave at Somersby Falls. It was generally believed at the time that the unfortunate black was cremated—the belief no doubt arising from the age-old aboriginal custom of lighting a fire on a deceased person's grave. There is no record of the cowardly white slayer being brought to justice.

For all time Gosford and the name of Kendall are inseparably connected. In Kendall's time the mail was carried from Narara on horseback up the steep Penang Mountain through the wild bush country and ranges to the Hawkesbury. Kendall at one time carried the mail, and the track by which he travelled may in places still be seen. It was the crossing and re-crossing of this track in the spring of the year, when the bush had a colour and life like the "light of song," that led to a pilgrimage to the famous rock near which he used to write. Kendall was the first Australian poet to win fame and recognition overseas. Kendall's rock is about two miles from Gosford opposite the monument and waterfall bearing its name. In Kendall's time there was no road. The waterfall then flowed straight in its course down the steep mountain. Now its water is taken by a culvert under the road. Below is the brawling brook of which he writes. The way to the rock is so steep from the top that the easiest route is through the "Jusfrute" property. Here is Kendall's old home. The way lies through the golf links all the way from the pipe-line up the creek. It is a pretty little glen, once dotted with palms. Save for the thin pipe the famous rock is unmarked. In

his poem "Mountains" Kendall refers to this locality again and again. He writes:

Rifted mountains clad with forests girded
round with gleaming pines
Where the morning like an angel robed in
golden splendour shines.
Shimmering mountains throwing downward
in the slopes a mazy glare
When the noonday glory sails through gulfs
of colour and glittering air.
Stately mountains high and hoary piled with
blocks of amber cloud
Where the fading twilight lingers when the
winds are wailing loud.
Grand old mountains, overbeetling, brawling
brooks and deep ravines;
Happy years amongst these valleys, happy
years have come and gone,
And my youthful hopes and friendships
withered with them one by one.
Days and moments, bearing onward, many
bright and beauteous dreams,
All have passed me, like to sunstreaks,
flying down a distant stream.

Great changes have taken place since Kendall's time. The flank of the mountain has been blasted and scarred by the engineers who built up and made the road.

Much might be written about Kendall. When he was a youth he worked at Biddell's—a Sydney firm of confectioners of long standing. When he left the firm he dropped a paper on the floor. His attention was called to the paper by Mr. Benjamin Biddell, but Kendall took no notice. It proved to be a jingle on everyone connected with the firm. The last verse ran:

There is a place in George Street
That some know better than others;
And all the little kids about,
They call it Biddell Brothers.

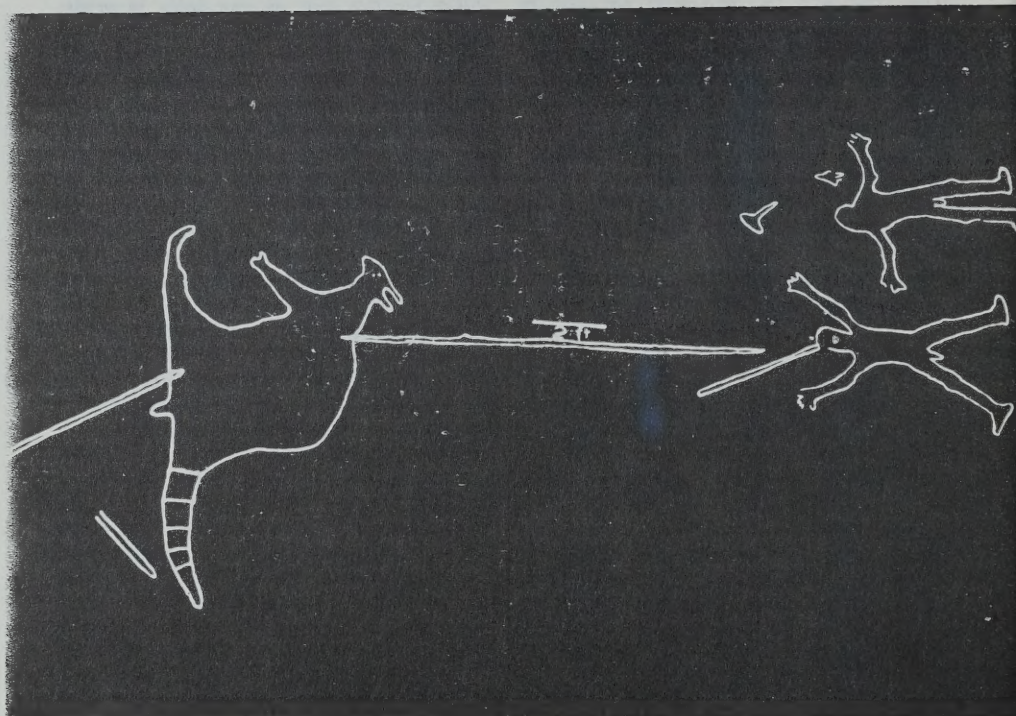
We wonder if that early effort was preserved. Like many another poet, Kendall had a hard time. He tried his hand at many things before he carried the mail. Later he was appointed to the position of a forest inspector by the late Sir Henry Parkes, who admired his poetry. Falling sick with consumption, he was brought back from the country by his old friends the Fagins. The disease was too deep rooted and he died, and was buried at Waverley "by the cliffs of the sea."

Henry Clarence Kendall is said to have been the grandson of a missionary. He was born in 1841, and died on 1st August, 1882. At the time of the pilgrimage to Kendall's rock, the poet's brawling brook was making a merry noise. It was swollen by the rains of the previous night. Higher up its bed was full of *débris* from the new road. The rock loved by the poet is in a fair way to become a rallying point to lovers of Australian literature. It is the objective of the Fellowship of Australian Writers to make the spot a centre of pilgrimage to Kendall's memory, in the same way that a rock in the English lake country is held sacred to Wordsworth.

The beautiful Somersby falls are in Kendall's country; the distance is about two miles from the Great Northern Road where it junctions with the Wiseman's Ferry road. Some distance down the ferry road a side road is seen on the left, a finger post indicates Somersby Falls. The falls road for the most part is bounded on each side by the natural bush. From either side of the road may be seen the Christmas bell (*Blandfordia flammea*), a large flowering species which does not grow in the Manly district; and the gigantic lily (*Doryanthes excelsis*). The road dips as Flood's Creek is approached. Coming to an open space with an old summer house, the sound of running water is heard. It is the Somersby Waterfall flowing over into a deep and wide amphitheatre, from whence it goes on its tumultuous way in leaps and cascades some miles down to its junction with Mooney Mooney Creek. The way down to the falls is by steps. There are other tracks for the tourist surrounded on all sides by the everlasting hills and wealth of trees and ferns. There are fern filled caves for the explorer, one of which, a bare rock shelter, is the home of a wasp city, thousands of whose finger-like combs are suspended from the roof. The

creek at the top of the falls is wide, with many holes in its bed, caused by erosion. Further up it has the appearance of a small reach of a placid river. The bush track on its opposite side leads up past the high mountain which dominates one of the sides of the lovely falls. On the tableland at the top is the orchard of Mr. Peter Howe—an old settler. His invitation to view an old aboriginal ceremony ground on his property was only one of the many kindnesses we experienced in this district. Conducting us over his fine orchard where he was growing citrus and passion fruit, he showed us a drain he had cut. It was lined on either side by hundreds of small tree ferns which had sprung up after he had disturbed the ground. The way to the ceremony ground lay over much barren ground and rocks, until we came on extensive rock saddles covered by the petroglyphs of the extinct aboriginal race. Passing over a number of minor carvings, the eye looked on what is probably some of the oldest memorials of the aboriginal inhabitants of the Australian continent. Their antiquity is undoubted. An ancestral deity of a most uncommon type was depicted. It was of great size, ten radial lines were counted on the top of its weathered head. Part of its body was like the hinder part of an emu—the legs quite unlike any present animal or man. Inside the outline of the spirit deity, from the neck downwards, were the tribal marks indicating that it was a spirit ancestor of an important tribal subdivision of a past gone race. There were two large dugongs, one—the largest—had a spear in its body. It had been thrown by one of the two hunters whose weathered bodies could still be seen.

From prehistoric times the Australian native has believed in mythical spirits who visited the earth in animal form. They were represented as possessing the forms at will, either as spirit animals, or mere animals. They could visit the earth unseen.



Rock Carving of Hunting Group near Gosford, New South Wales.
Retraced and photographed by the method described in MANKIND No. 2.

By courtesy of The Australian Museum.

From these animals or spirit ancestors are supposed to have descended the various totemic groups; from these have proceeded the laws, ceremonies, and knowledge, belonging to each totemic group. The fact that the dugong does not live in our southern waters puts the stamp on the character and age of these rock carvings. Some years ago fossil bones of the dugong were found at Shea's Creek, near Sydney. It was stated by scientists at the time, that its disappearance in the remote past was caused by climatic changes cooling the water. The old petroglyphs at Somersby mean, that centuries before the keels of Spanish and Dutch ships ploughed the southern seas, the original inhabitants of Australia hunted the dugong or sea cow in Brisbane Water. After its ex-

inction, countless generations of blacks must have come and gone who never saw the dugong, and whose knowledge of it could come only by tradition and the ceremonies which were performed on this rock.

In the Somersby district another group was visited. It is thirty-six feet over all, and the artist—for he was one—had engraved on the enduring sandstone the hunting of the kangaroo. The capture of the animal is shown in all its phases. It is portrayed in the position it assumes when brought to bay; it has been struck in the shoulder by the hunter's spear, while falling backwards a second spear has struck it from underneath. The gestures of the men who have thrown the spears, are full of life. There is a native bear in the natural pose it takes when sitting

on a tree. A fine-cut tomahawk and outline of a hand comprise this group.

The mountain moss of the poet still grows in Kendall's land, but in the words of the Aboriginal Death Song:

The hunter and climber of trees
Now doth his tomahawk rest;
Dread of the cunning wild bees
Hidden in hillocks of dust.

In the Somersby district portion of the old track of the Aborigines may

still be seen, but the feet that once used it will tread it no more. The last survivor of the dark race in the Gosford district was Billy Faulkner. Of his passing, Kendall commemorates in the "Last of his Tribe":

He crouches and buries his face in his knees,
And hides in the dark of his hair,
For he cannot look on the storm-smitten trees
Or think of the loneliness there,
Of the loss and the loneliness there.

A Fijian Yaqona Ceremony

(By KEITH KENNEDY.)

DURING a riding and walking tour on the island of Vanua Levu, the second largest of the Fijian group, a friend and I visited Naweni. Here we were welcomed by the buli (chief), who arranged a yaqona¹ ceremony in our honour. Yaqona is the Fijian word for kava, a drink once extensively used throughout the South Seas. It is made from the root of a plant (*Piper methysticum*), which is pulverized and soaked in water. The Fijians now drink it on any occasion, but a regular yaqona ceremony is still a formal affair, and must be carried out according to tradition.

While the necessary materials were being got together, one of the Fijians gave an exhibition of tiqa² throwing. The tiqa is a sports implement consisting of an ovate-shaped head of vesi wood, called the ura toa,³ fixed on a gasau reed (*Eulalia japonica*) about four feet long. It is thrown by placing the fore-finger at the end of the reed and projecting the implement dart fashion. When thrown properly it travels with considerable velocity, bouncing along the ground with a queer

hopping movement something like the weet-weet of the Australian Aborigines. Tiqa throwing is a sport sometimes held between the people of two villages. The members of one team throw their tiqas, and the one travelling the furthest is marked by a reed stuck in the ground. Then the other side throws, and the team that hurls the greatest distance gains the victory.

After making a very bad attempt at throwing a tiqa I returned to the buli's vale (house). It was very well built and had a tibi-tibi thatch. Tibi-tibi means everlasting, because the thatch is made of sugar-cane leaf woven in a special manner, so as to make it very durable. In front of the entrance of the vale was the usual davui (shell trumpet) to call the people together when necessary, while, from a pillar just inside, hung eight white cowrie shells (*Cypræa ovula*), the emblem of the buli's rank.

We were next shown how to make fire with the nita, or fire-plough, the method used by the Fijians before the coming of the Europeans, or, even at the present day when they run short of matches. A thick branch of vau (*Hibiscus tiliaceus*) about five feet long was brought in and laid on the ground. The bark was stripped from it, and several inches were planed off the wood with a knife, leaving a

¹ Pronounced yang-go'-na.

² Pronounced ting'-ga. Dr. Raymond Firth describes a similar implement in "A Dart Match in Tikopia," *vide Oceania*, Vol. I, No. 1, April, 1930.

³ Or Uli-toa. Specimens can be seen in the Fijian section of the Australian Museum, Sydney.

shaving at one end of the cut. One of the Fijians held the branch steady by placing his foot on it, while another crouched over, and, with crossed hands, rubbed a pointed stick briskly up and down the planed surface. The rubbing gradually wore a groove in the wood, causing a little heap of wood-dust to accumulate under the shaving. Very soon this dust commenced to smoke, and, as more hot particles were ground out of the groove, it smouldered, and was quickly blown into a flame. A fire was kindled in a remarkably short time, the rubbing part of the process taking less than a minute.

Meanwhile preparations for the yaqona ceremony were going on. Pieces of the dried root were crushed with a tabili (a pestle and mortar of hard noko-noko wood), in obedience to a law, passed by the government, which prohibits chewing the root as was done in olden days.⁴ Then the participators of the ceremony came in, their faces daubed with black streaks, and black rims painted under their eyes. Heads and arms were decorated with green wreaths of wa-na-kalou (vine of the gods), a climbing fern especially consecrated to ceremonies of a sacred, or semi-sacred nature. They grouped themselves on the mat-covered floor behind a large tanoa (yaqona bowl), into which the pounded root was placed. Immediately behind the bowl squatted the very important person who mixes the brew, and, by his side, was a gorgeous individual who was to act as server of the liquid. This man's hair, ears, arms, and legs were decorated with green leaves and fronds, while around his waist was draped masi (tappa), and crinkled ribbons of woi-woi made from pandanus leaf.

At a word of command from the mixer, repeated by the company, a huge hollow bamboo, its end plugged with green leaves, was thrust through the

entrance of the vale. This was the daga, a container from which water was poured into the tanoa, the water streaming through the leaves, which prevented it from splashing. The mixer commenced to knead and strain the brew with a quantity of hibiscus fibre, and the company started the sere ni yaqona—the yaqona drinking song—accompanying it with rhythmical hand clapping. The construction of the song was interesting, for it contained both harmony and counterpoint—a surprising thing for primitive music. There could be no doubt as to its antiquity, for yaqona drinking when done ceremonially, as I saw it, is a semi-sacred affair, and must keep to the traditional form. A melody in a four-note scale in six-eight time was given out by the leader—a tenor—the bari-tones joined in with a counter-melody on the second bar, while the basses kept up a drone on the key-note. The song came to a strange ending with the dissonant chord of a major second on the tonic—a finish which I have heard in several of the older tunes, and seems typically Fijian. There was a small dance lali (wooden gong or drum) in the corner of the vale, but it was not used for this particular song—the time being kept by hand-clapping. During the singing the mixer kept straining the drink through his bunch of fibre, which he occasionally squeezed dry and ceremonially passed behind his back, shaking out the undissolved particles of root behind him, and giving the squeezed fibre three formal pats before resuming the process.

With the song finished the drink was ready and the mixer, dipping his bunch of fibre into the tanoa, squeezed out the whitish liquid into a bilo (coconut shell cup) held by the gaily caparisoned server, who brought it forward to me to have first drink as guest. I intimated, however, that I would prefer to see the complete ceremony before joining in, and, as my companion was of the same mind, the buli as chief took the first drink. He drank it right off,

⁴In Fiji it was the custom for boys to chew the root. It is still occasionally prepared in this manner, for I saw it done once near the Kolundrusi River. In Samoa and Tonga the chewing was done by girls.

threw the dregs out the door-way, and dropped his cup on the mat; it is not correct Fijian etiquette to hand your cup back. As he finished, the company gave two hollow claps with cupped hands and exclaimed "bula!"—a word equivalent to "long life to you!" He was next supplied with a drink of water to rinse his mouth—a prerogative only accorded a buli and only done after the first drink. After the buli a commoner had a drink, then the second highest in rank, then another commoner, and so on, until all had their share. Then the round commenced again, and we joined in.

Personally, I do not dislike the drink, but it takes some getting used to. It has medicinal properties, and, before the war, the Germans used to import large quantities of the root from Hawaii. Heavy imbibers do not get drunk in the true sense of the word, but

their legs often become paralysed. After drinking a quantity the skin often has an itchy feeling, and the skin of a constantly heavy drinker sometimes becomes scaly in appearance. The Fijians, however, rarely drink to excess. During the ceremony it must be swallowed straight off, any pause before it is finished being looked on as bad form; then the dregs are thrown away, and the bilo dropped on the floor—not spun as is the custom on some of the other Pacific islands. The buli and guests always have a special bilo, but the others of lesser rank drink out of a communal cup.

Yaqona ceremonies often keep on for many hours, so, after four rounds, we bade our host and company *sa moce!* (good night) as we had to return to Wino Plantation that evening, and there was a couple of hours' walk before us.

An Aboriginal Midden at Quibray Bay

(By J. S. ROLFE.)

PART II.

THE workshop portion of the camping-ground appears to be situated at a distance of about 150 yards from the eastern end, where the trees once grew closely together, for here the ground is littered with waste material and cores, and the best collecting is to be done on this spot. Small pieces of red ferruginous sandstone, which was used as a pigment, are sparsely scattered over this area. At a point some fifty yards east of this workshop site I have collected eight flat leaf-shaped implements of varying sizes made from a dark brown-coloured ferruginous sandstone, in some cases coated with ironstone, which were used in the manufacture of fish hooks from various shells. A hole would first be burnt in the centre of the shell, and with this implement enlarged until a circular hollow disc remained. Then, by carefully breaking off a portion of

the circle, a C-shaped fish hook would result.

One collecting trip resulted in the discovery of a perfectly symmetrical crescent, a small type of implement very rare on the east coast of this State, but which occurs in large quantities in the far western districts, in Victoria and South Australia.

Fragments of human bones may be seen at various points, and, on one occasion, a portion of a very old skull containing some perfect teeth was unearthed. No doubt many bones lie buried beneath the surface, to be exposed at a later date when the wind shall sweep away their covering.

On top of a small shell-mound at the eastern end, several fragments of bottle-glass were observed, and, on closer examination, seven pieces were noticed to bear definite indications of secondary chipping. These pieces were eagerly collected, and their find-

ing is unique. One specimen in particular shows a remarkable resemblance to a diminutive Tasmanian groover type. The surface of these small implements, which are all of the scraper type, is dulled by the constant passage of moving sand, and is covered with small deeply cut scratches, which, however, could not have been caused in this way. It is suggested that perhaps when the working edge was

hunted the waterfowl, swans and quail that even some years ago were plentiful in the surrounding district; while the rocky points around the north side of Port Hacking abounded with rock wallaby and other marsupials. The number of fish-hook files found suggests that fishing was almost a daily routine. Snakes, which even this day live in the marshy scrub-covered lowlands around Cape Solander headland,



Butt and Roots of Old Tree, Quibray.

retouched by chipping, the implement may have been held between two stones for greater rigidity, and thus these scratches originated. Apart from these curiosities, two regimental buttons, blackened with age, were found amongst the shells, one appearing to be a relic of Governor Macquarie's own regiment, the 73rd, brought out from England by him in 1809, while the other bore the inscription of the 19th Highlanders. A half-crown piece of the reign of George IV, dated 1820, and in a good condition, completed this unusual collection.

The only evidence to-day visible of the former inhabitants' food are the bleached shells, yet, no doubt, they

would form a welcome diversion from the shellfish diet.

It is indeed strange that Cridland, in his book, "Port Hacking, Cronulla, and Sutherland Shire," while describing the middens, rock-shelters and carvings, and giving other details of aboriginal occupation of the north and south side of Port Hacking, and along the coast to Garie, makes no mention of even the existence of this old camping-ground. He refers to the huge cone at Boat Harbour, about a half mile to the east, and even to the old Cronulla-Kurnell cart track that skirts the Quibray midden. Perhaps this is due to the inhospitable nature of the surrounding neighbourhood, which does

not invite a close exploration. A glance at the parish map of this district reveals that the only settlement of any great size is situated around Cronulla, and even here as late as 1890 there were few dwellings, as the land holdings were large; so it is apparent that, for a long time after the occupation of white people, the Aborigines would be comparatively safe in their isolated territory. At what period they abandoned their primitive mode of living, and drifted further north towards the white settlement around Port Jackson, it is impossible to say, for there appears to be no written record.

The presence of the implements worked in bottle-glass and the regimental buttons, although not much importance can be attached to the latter, indicates that for a time, at least, the Aborigines refused to desert their old place of abode, in spite of the none too kindly treatment afforded them by the early settlers. After their evacuation, their camping-ground was completely covered by a barren waste of sand, blown up by the southerly gales from the ocean beach. This is quite evident on examining the countless dead trees, and on vainly searching for any

semblance of vegetation. In later years, owing to winds from the north-east, the sand has been sent sweeping back in the direction of the sea, from whence it came, and a portion of the camping-ground to-day lies uncovered. Now, however, with the strong prevailing southerly winds, the sand is slowly on the move northward again, and, in some parts, the advancing wall is sixty feet high. At the north-western side, across a small hill of sand, there is a miniature forest carpeted with a thick lawn of buffalo grass, which, in time past, escaped the first advance of sand, but which now is slowly being covered, so that in many places trees are almost completely engulfed, and their bare upper branches, protruding from the sand, bear testimony of a vain struggle against merciless Nature. Truly a parallel with the Aborigines' struggle against another white advance.

In later years there will be no trace whatsoever of this interesting midden, for when the sandhills have been levelled by the wind it will lie once more buried many feet under a flat expanse of sand, joining Botany Bay to the Pacific Ocean.

(Concluded.)

Charms and Amulets

(By D. RAYMOND.)

PART II.

THE deep-rooted belief of the Chinese that such objects have superhuman powers, has its counterpart in other countries, such as Persia and Egypt. The ancient Persians learned the custom of wearing amulets from the ancient Egyptians, and wore small inscribed clay cylinders around the neck or on the breast. The ancient Egyptians, whose belief in the "evil eye" was profound, had a charm in the shape of an eye to prevent malignant influences performing their work. The ancient Greeks and the Hebrews were also superstitious in their use of

charms, the latter people, at the present day, in many cases touch a small frame attached to the door before entering a room, on which is inscribed an extract from the Talmud. Early Christian amulets or charms were made from the supposed wood of the Cross, and more than one crusade was made with the object of securing holy relics, to be used as a protection against evil. Enormous prices have been paid, not only by churches and monasteries, for such relics as fragments of the true Cross, and remains of saints, but private individuals of the day sought and bargained

for them. Mackay¹ states that: "A grove of a hundred oaks would not furnish all the wood sold in little morsels as remnants of the true Cross." During the Middle Ages, and especially during the fifteenth century, when the people, viewed in this far-off day, seem to have gone mad for fear of the devil and witchcraft, amulets and charms played an important part in pacifying the minds of the populace, but it is doubtful if they had the effect that many would have desired. The origin of the word "amulet," which is generally described as an object carried about the person as a charm against evil, is very obscure. In Latin it is a word of unknown origin, but the Arabic *himālah-at*, which literally means a carrier such as applied to the shoulder belt from which a small Koran is hung on the breast,² appears to give a clue that points to its progress and development of belief throughout the ages from various widely spread countries that undoubtedly have been in contact with one another.

From the reign of Edward the Confessor (A.D. 1042-66) to Queen Anne (A.D. 1702-14) it was the custom in England to "touch" any person suffering from scrofula or, as it was more generally known, "the king's evil." It was thought only necessary for the royal hand to touch the affected part and the cure was effected. Gold coins known as "angels," which bore on the obverse a representation of the archangel Michael, were then presented and worn as a talisman or charm against any return of the disease. Queen Anne was the last ruler to "touch" for the "evil," and also to present medalettes known as "touch-pieces." These latter pieces still bore the representation of St. Michael slaying the dragon, which no doubt personified the disease.

A small piece from the Chinese has quite a modern touch with its inscription which reads: "Official Promotion, Increase of Official Salary." The reverse

shows the figure of a monkey. Many animals, such as the deer, tortoise, horse, tiger, rat, and also the snake, appear on these pieces, and have their individual meanings. The weird Pa Kua, a mystic device with eight diagrams, gives the wearer the power to read the future. As many of these amulets are very ancient, some dating back several thousand years, it is evident that the powers claimed by certain semi-religious sects of the present day were not new to the Chinese of ancient times. There are specimens that have a touch of humour, as with an amulet of Chang Kuo, which shows him riding on his mule. This sturdy animal is said to have carried him several thousand miles in a day, at the end of which Chang Kuo conveniently folded the animal up and hid it in his wallet.

Frequently, during the Roman period, gifts of great rarity and beauty were made to the temples of the gods, as an offering of thanksgiving after some great victory. Thus, the temple of Mars, the god of war, was so endowed. Also, no expedition would be undertaken unless prayers were offered and temple offerings made. Boys, when they assumed the gown of manhood (*toga*), hung up to the *lares*, or departed spirits of their ancestors, a *bullā*—a hollow disc of gold or silver, or, in the case of the poor, of leather—which was afterwards worn around the neck; this contained a charm as protection against the "evil eye." The modern mother often places a bead necklace around her child's neck, so that it may grow slender and beautiful. Mankind, in past ages, may appear to the modern mind to have had some peculiar and rather foolish ideas, but, when it is considered that once any illness was supposed to be either due to the attack of supernatural beings, or to their actual entry into the body of the sufferer,³ it will be seen that many of the customs and belief of our time are but survivals from the past.

(Concluded.)

¹ Extraordinary Popular Delusions, Vol. II, p. 2.

² Chambers' Etymological Dictionary.

³ The Legacy of Greece (Medicine). Singer.

The Muckera Stone

(By FREDK. GEDYE GODDARD.)

THE "Muckera Stone" was used in the western districts by medicine men during the rain-making ceremony, and consists of a stalactite measuring about three inches in length. This ceremony was performed during drought periods to bring rain. To ensure a continuous supply of water, the stone was generally placed alongside a *cowal* (swamp), and the spot was avoided by the tribe.

The rain-maker was generally the medicine man of the tribe—a magician working in the public interest. He was judged to be a far more important personage than the modern meteorologist, for, he did not merely record meteorological data through the seasons and content himself with forecasts of the weather conditions for a few days of the future, but was credited with the power of actually influencing the weather and regulating the rainfall.

No doubt the responsibility thrown upon the medicine man forced him to study meteorology as best he could, and to formulate hypotheses. When he was called upon to make rain he had to know at least the right moment when to perform the magical rites, in order to receive credit for the fulfilment of his undertaking, since the temper of the tribe might be such, that the rain-maker might not always be able to pacify it by attributing a failure to some other magician's interference or to the behaviour of the community itself.

So we must regard the aboriginal rain-maker as the forerunner of the scientific investigator, even though he did not reveal his methods to his fellow tradesmen, but used the procedure of imitative magic. The rain-making ceremony was generally followed by such acts as the scattering of water over the "Muckera Stone" by the

medicine man, throwing ashes and dust in the air and smearing their bodies with charcoal and grease by those taking part in the ceremony. This was symbolic of heavy rain clouds.

Whilst jackarooing on Moonagee Station, in the Nyngan district, on the Bogan River, in 1882, accompanied by three black boys, I was cutting out water rats from logs on the banks of a *cowal*, and came across a native bag made of kangaroo skin. On being opened it was found to contain a full assortment of native weapons, and charms used by medicine men on ceremonial occasions.

Several human hair girdles, consisting of a piece of double-plaited human hair twine, which when worn was wound round and round the waist, forming a thick girdle, ~~one~~ ^{one} extremity having small bone that ~~passed over~~ ^{passed over} the girdle to hold it in position and to enable the wearer to unroll it more readily; also straps and waistbands or belts made of strips of opossum skins, and twisted or plaited opossum or kangaroo hair. These were fixed in front or behind, and knotted or tied together when used by medicine men during initiation rites. These belts measured about a yard in length. The bag also contained a quantity of ochre (ruddle), and white pigment, used for adorning their bodies with designs on ceremonial occasions, according to the particular rite to be performed, and a pointer, or death-bone, which measured eight inches long, half an inch in diameter at the base, and tapering off to a point. This interesting object was made of human thigh bone, highly polished, and yellow from age and use. A pair of drumsticks made from human thigh bones and a "Muckera Stone" completed my find.

Upon seeing the sacred stone, the three black boys I had with me immediately yelled, holding their hands over



A Muckera Stone in the Australian Museum.

their faces as if shielding it from sight, at the same time bolting away from the spot for some considerable distance.

After examining my find and carefully replacing each piece back in the skin, I came up to the boys and I found they were still frightened, and they told me that their teeth would fall out because they had seen the sacred "Muckera Stone."

Returning to the homestead, Mr. Richardson advised me to return my find to the spot where I had found it, but I knew it would be useless, as

already the medicine man, as well as the whole camp, would have heard about it from my black boys, and that I had tampered with it.

However, I kept the outfit and it, together with many other native implements, was later given to Lord Carrington, then Governor of New South Wales. It would be rather interesting to know whether the collection found it way into the British Museum or other suitable place in England.

The old medicine man never spoke to me for over a year after I had found his gee-gaws, and always scowled when I was near. A common belief among the Aborigines was that it was death to the person who found the "Muckera Stone," but I must have had a charmed life, as nothing serious befell me, with the exception that, on crossing the yards one day, I heard a grunt and instinctively ducked, and at the same time a heavy waddy, thrown by an old native woman, came flying past my head just touching me on the shoulder. I immediately straightened up and walked off with her weapon as if nothing had happened. This made her more angry, and I could hear her yabbering as hard as her tongue could go, until I was out of the yard.

For fully a year I observed that, although the camp was only a quarter of a mile from the homestead, a wide detour of a couple of miles was always made to and fro by the medicine man rather than cross a certain indent or draining channel across the road from some *gilgais*, to the *cowal*. Evidently this had something to do with the hiding of the "Muckera Stone," as the position of it when found was in a direct line with the drain.

The Extinct Tasmanians

(By J. S. FALKINDER, Falmouth, East Coast, Tasmania.)

(From a paper prepared by Mr. Falkinder, and read before the Society on June 17, 1930, by Mr. R. H. Goddard.)

PART III.—STONE CULTURE—Continued.

THE following is a convenient way of dividing these implements:

1. Flaked implements, without improvement in reducing size.
2. Flaked implements, improved by reducing size.
3. Flaked implements, improved by marginal chipping.
4. Implements improved by marginal chipping, and size reduced by secondary treatment.
5. Retouched implements, originally flaked.
6. Retouched implements, bearing secondary treatment characteristics.

This fairly covers the extent of stone workmanship.

The uses required from cutting implements were for:

1. Making weapons.
2. Tree climbing.
3. Skinning.
4. Shaving.
5. Surgery.
6. Boring.

The non-cutting kind of implements were used for:

1. Pounding or hammering.
2. Rubbing or grinding.
3. Throwing stones.

The uses required from the implements could all be performed with sharp flakes, and this point is important. The chipped implements when blunted appear in some cases to have been retouched. The question is whether this practice was general, as one frequently finds implements which have been discarded without being retouched.

The most conventional types occur when a tribe lives in a locality where chert and similar materials abound.

Nearly all the implements fabricated were of the scraper or rasping variety. The most conventional type is that called the "duck bill" groover—a name which is really a misnomer. Other con-



The last pure-blooded member of the Tasmanian race. She died in 1876.
TRUGANINI.

ventional forms occur in the flat and keel-shaped scrapers. The remaining types are of such a fortuitous nature that they do not approach the same conventional form. This really makes collecting very interesting, as one can find numbers of similar shapes, though fortuitous. As a conventional type the commonly called "duck-bill" is so very much ahead of the scraper types, that it has given me the reason for consideration of the theory of deterioration in culture of a more remote period. The "duck-bill" is undeniably true to its type in every part of Tasmania.

The character of the implement is such that it could not very well have been used for making spears or throwing sticks. As these were the only wooden articles known to have been manufactured, the question can now be asked: what was required in fire-making? The "duck-bill" groover would prove an efficient implement to gouge out a hole wherein to place a fire drilling-stick. I have about two hundred specimens of these implements with the "duck-bill" process measuring from 0.3 centimetre to 1.8 centimetres. Some are of the bulky or hat-shaped type, whilst others are crown-shaped, but the majority are flat and conform, except for the "bill," to the very favourite flat-shaped scraper characteristics.

The most common implement in Tasmania was the flat scraper; it is the most dominant tool found. This scraper, or rasp, would perform nearly all the services required by the Tasmanian, and was their most useful tool. The crown-shaped scraper is another fairly common type. It was frequently fabricated into a concave scraper, as its bulk suited this object. The crown type of scraper produced two sub-types: a round or straight-edged scraper, and a more definite type of concave scraper. The keel-shaped scrapers of rostro-carinate characteristics were fairly plentiful in a few centres, but scarce elsewhere; they were not a common design. Then there is the *grattoirs tartes*, or hat-shaped scraper. I had formerly some doubt about this implement, but recent finds have given sufficient indications for the belief that it was used as a tool. Several specimens are distinctly different from the well-known cores or nuclei. They possess characteristics which could easily prove useful for rasping. The more one realizes the fact that the nature of work done on wood was principally rasping, it is quite easy to conceive that nearly any formed implement which could crudely perform this service, was a tool. It is fairly certain from early records that only two

wooden articles were manufactured, so, in considering for what purpose implements were used, one can more readily classify the Tasmanian artefacts. Cutting tools were required for cutting, rasping and sawing. The types may be classified into the following varieties:

A. *Scrapers*—

1. Flat scrapers.
2. Crown-shaped scrapers.
3. Hat-shaped scrapers.
4. Keel-shaped scrapers.

B. *Rasps*—

1. Spoke-shaves.

C. *Knives*.

D. *Gouges*—

1. So-called "duck-bill" gouge.

E. *Hand-Axes*.

F. *Borers*.

G. *Hammers*—

1. Chipping hammers.
2. Pressure-flaking hammers.
3. Pounders.

H. *Grinders*.

The spoke-shaves were a type which displaced the more awkward scraper. Some possess a high technique in fabrication, but lack conventional form. Knives were used as surgical instruments and for shaving; the sharp chalcedony flakes would be very efficient for these purposes. Borers were probably used for piercing skins and shells. Axes and choppers measured from three to five inches long. Some of these choppers or axes possess a flat base, and it has been suggested that on this account they were used for tree climbing. The non-cutting implements of the natives were but few compared with their mainland neighbours. Chipping hammers were used for stone fabrication and breaking shellfish. On a midden at Diana's Basin, East Coast, Tasmania, Ben Lomond tribe, I had the great fortune to find an anvil which, when I turned it over, showed that it was coated with a lime deposit from shell fish, evidence of smashing the shells for some purpose, possibly to extract the mollusc.

The pounders, or larger hammer-stones, were used for breaking down large cores. From adjacent deposits large flat stones were carried into the camps in the dunes, and there used as anvils. They were general working tablets, upon which implements were manufactured and ochre pounded and smoothed into a powder. The grinders were probably used for reducing native bread (*Mytilita*) into an edible state. They are more readily recognized on account of their smooth or worn periphery. It would be interesting to mention that I have two ochre grinders containing a good deposit of this pigment.

The use of bone implements has been questioned. Dr. W. L. Crowther, of Hobart, wrote an interesting paper for the Royal Society of Tasmania, and considered that they were used for extracting the mollusc from its shell, as a considerable proportion of shells found on mounds are unbroken, and those not intact do not seem to have been crushed with stones. Ling Roth and La Billardière stated that the natives prepared small spatular pieces of wood to separate limpets from rocks, and that these special pieces of wood were smoothed with a piece of shell.

PART IV.—ORIGINS.

The origin of the Tasmanian race has provided a wide area for speculation. It is generally conceded, says H. J. Fleure, "that a relationship existed with the Negrittos of New Guinea." The hydrographical survey carried on by the Indian Government suggested the former existence of a continent in Indonesia, now submerged. The raised floor of the Indian Ocean, in certain parts, provided this theory.

Some consider the Australoid a specialized type, and the modern representative of a race whose common ancestry in the human stem was closely associated with the Negritto stock. As a type the Australoid must have taken considerable time to develop. The original Negrittos, however, are more faithfully represented in

type by the survivors of the Sakai of the Malay Peninsula, Andaman Islanders, the Papuans, Tasmanians and Negritto races in Africa. The gradual submergence of this centre of the Negritto stock isolated various groups. The section of this race that we are more particularly interested in, is the Papuan group of the Negrittos. Papua, or Melanesia, was the more immediate home of the Proto-Tasmanians. In Papua and Melanesia these Negrittos held sway for a tremendous space of time—rarely venturing south, where they were repelled by the fierce and war-like Australoids. Such that did land on the northern shores of Australia were assimilated, as were the coloured races who came later to the north of Australia. Here in Papuaasia, the Negrittos flourished in a land of plenty until they were buffeted by the waves of Caucasian migrations into Polynesia, each wave driving the Negrittos deeper into the mountain regions of the larger islands, or into the less accessible islands of Melanesia.

This now reaches the point where we have to consider from the slender evidence we can bring to bear on the subject as to how the Proto-Tasmanian Negritto group reached Tasmania, and by what route. There are two routes over which theorists have divided themselves into two camps. The "Overlanders," and those who believe the Tasmanians reached their island homes by canoes *via* the Australian coast. In order to consider the theory of the "Overlanders," I quote what Professor Sir Edgeworth David has to say about the Australian and Tasmanian land formations¹: "That Tasmania, after being joined to Australia in early Tertiary times, was divided from the mainland by a strait in middle Tertiary or early Pliocene times, then reunited or nearly reunited in late Pliocene or Pleistocene time, allowing the Tasmanian Aborigines, ignorant of the

¹ In "Geology of the Commonwealth," Federal Handbook of Australia, 1914, Chapter vii, page 252.

building of sea-going canoes, to migrate into Tasmania from the mainland. That the warping of the Australian and Tasmanian peneplain was chiefly Post-Miocene, is proved by the locally folded and uplifted Lower Miocene beds in the Mt. Lofty Ranges, near Adelaide. Also the latest great outburst of volcanic energy in all the States of the Commonwealth (except Northern Territory) took place in Post Miocene times. Moreover, the glaciation of the Tasmanian Highlands and those of south-east Australia, took place in late Pliocene or Pleistocene times, and these glaciations were almost certainly contemporaneous with accentuated crust warping, though it is not intended to suggest that there was necessarily a causal connection between the two phenomena, though there possibly may have been."

That the Tasmanian reached Tasmania probably at the close of the last glacial epoch seems fairly certain. This would have occurred anything from 15,000 to 25,000 years ago so as to synchronize with the fourth glacial epoch of the Northern Hemisphere.

The early waves of Caucasian maritime migration would have occurred probably because of climatical reasons. They would push the Australoids further south, who in turn would spend the force of this human movement upon the Proto-Tasmanians, who were then probably inhabiting Victoria, South Australia, parts of New South Wales and Tasmania, which would then be connected with the mainland, or by a series of islands which would permit easy access to Tasmania by means of the frail rafts which were used by the Tasmanoids. As the climate became warmer, the isolation would occur. The Proto-Tasmanian stock would become assimilated with the Australoids, and account for that difference in the Australian Aborigines of south-eastern Australia. Cranially, the Australoids and Tasmanoids are different in cases to a marked degree.

Was this difference evolved during their period of isolation? or was it evident prior to their severance from their neighbours on the mainland? To consider this point, it would be well to quote Sir Arthur Keith, who states that Neolithic man did not depart very widely from his modern successors. In this case, only a matter of 3,000 years! But sufficient comparison to impress the fact that the alteration of a human type takes a long space of time. Could the two types be so widely different after a period of 15,000 years?

The most recent opinions of anthropologists postulate that evidence seems to indicate each year more strongly, that the human type evolved more slowly than hitherto supposed. Geological evidence gives a basis for the Overland theory, but the process of the evolution of the two types needs the soundest investigation, and does not appear to provide satisfaction to the oppositionists. But, provided these facts are reconciled, as they may be, this last fact, coupled with evidence of lack of antiquity, cannot be reconciled from what is known, and therefore places me in the camp of the "Coastal Migration" theorists until such time as there is a more convincing theory established.

From my personal observations from many centres in Tasmania, I cannot find human remains which give sufficient evidence to convince me that the Tasmanian inhabited Tasmania for not more than 10,000 years at the very outside! To be venturesome, this could be reduced considerably. Nothing has yet been discovered, so far as I am informed, of strata remains at any great depth. The oldest known in Tasmania are at Little Swanport where the shell deposits reach down 6 feet, but only covered at the top with about 1 to 2 feet of subsoil. The shell refuse is principally oysters, and could have been collected in a few hundred years. Or to exaggerate, 2,000 years. The salient feature of deposits is the

absence of thickness of soil covering the remains. Here is the apparent confounding of evidence of great antiquity.

It must be borne in mind, however, that in Tasmania there has been little attention paid to aboriginal indications by persons in charge of civil excavations. So my statements must be qualified, and my knowledge can only be such that can come under course of observation, in the ordinary methods of collecting artefacts. The ground one can cover is necessarily limited. In conversation with Tasmanian collectors I have found they have agreed upon this point, and their experiences coincide with my own. It is this fact which has led me to give so much thought to the "Coastal Migration" theory, which we will now consider.

It has been estimated that the first waves of migration into Indonesia and Polynesia took place in the Old Stone Age, possibly 100,000 years ago, and that the last wave did not occur later than 3,000 years ago. This hypothesis is supplied by MacMillan Brown, and takes prominence in his work on "Maori and Polynesian." These migrations had their effect upon the Negritto peoples, who lay in the route of this human movement. Each successive wave isolated and drove the Negrittos into more inaccessible regions, where they had to contend with fresh difficulties. The Caucasians, who were a maritime people, must have supplied these Negrittos, who had hitherto been purely land migrants, with a knowledge of canoe building and navigation. The early Caucasian migrations may not have caused such a widespread move-

ment of the Negrittos or Papuasians. It seems likely that the later arrival of Caucasians would drive the semi-Caucasianized Papuasians into the remoter parts, where, in turn, they displaced the purer type of Negrittos. These Negrittos, already possessing a good knowledge of canoes and seamanship, spread in various directions. There are certain indications pointing to the arrival or a movement of a Negritto race in the region of the north-eastern part of Australia, where there are numbers of islets connecting the most western islands of south-western Melanesia with the south-eastern coast of Queensland. There is, too, an opinion expressed that the Negrittos may have inhabited the whole of Australia, and were displaced by the Australoids. Other authorities consider the Australians a specialized type, who did not have any relationship with any present races in this part of the earth, but evolved from a common ancestry with the Negrittos.

The late Sir Baldwin Spencer said: "It is, at least, very doubtful if the present Australian race shows any trace of inter-mixture with the primitive Negritto who formerly inhabited the continent, and it is, at all events, very suggestive that we never meet amongst recent Australians with any indications of really frizzly hair, one of the chief characteristics of the Negritto. If there had been any such blending, we might expect to find some such trace of it in the south of the continent where there is none."

(To be continued.)

Notes on Stone Axe Found at Tarro, N.S.W.

A FEW years ago I was given an aboriginal stone axe, found on a farm near Tarro on the Hunter River, about eleven miles from Newcastle. It differs from every type I have yet found in the Hunter River Valley and, so far as one

can see, without a section being made, it is of a fine grained quartzite. The dimensions are as follows: Weight, 7 lbs.; average length, 10 inches; width, 5½ inches; thickness, 3 inches; length from centre of cutting edge to a line

joining two uppermost ends of edge, 1½ inches. Both sides of this axe have been ground for three inches back from end of edge, probably for the purpose of giving it a better shape. There are indications that the axe head has been fashioned for hafting, but they are not beyond doubt. No stone of the class used for this axe is found at Tarro, but at Raymond Terrace large pebbles of

this type are found in *muree* rock. Each face of the axe above the ground edge on sides is flat and smooth like a glaciated pebble.

Although I have never found a stone implement so large on the New South Wales coast, I know that those of massive form were used as wedges for removing sheets of bark.—W. J. ENRIGHT, B.A.

Anthropological Notes, News and Personalia

While in Sydney on a recent visit, Mr. F. E. Williams, Government Anthropologist in Papua, called on us. Opportunity was taken to enrol Mr. Williams as a corresponding member and subscriber to MANKIND.

Mrs. M. Hemsworth's party made an expedition to Port Kembla on July 19th, 1931. After the late cyclone much material was obtained.

Early in August our Hon. Secretary made another collecting foray on Murrumbidgee. He also called at Tuross Head, but an untimely illness necessitated an early return to Sydney.

On 26th August Mr. J. Powell took a party in his car to the sea-board in the vicinity of Tuggerah Lakes, the distance covered to and from Sydney being 190 miles. The house in which Hargraves, the discoverer of gold in Australia, spent his last days was inspected and the party then proceeded to some aboriginal middens on the coast. Included in the party were Mr. R. H. Goddard and Mr. Harvey.

The Swords Club, at its Annual Display on August 24th in the Conservatorium Hall, gave exhibitions of duelling as practised through the ages, and in various countries. Included were net and trident *versus* sword and shield of the ancient Romans, cloak and sword duel, sword and dagger (18th century), ken-jitsu of the Japanese, the modern duel, and sabre play.

The Rev. C. W. Whonsbon-Aston writes from Fiji that he has just had a very interesting trip around the seldom visited islands east of Ovalau. Places he landed at were Mbatiki, Nairai, Wakaya and Ngau.

The Editors wish it to be known that all financial members of the Anthropological Society are entitled to a copy of MANKIND.

On 29th August the Manly and Warringah Historical Society joined forces with the Anthropological Society in an excursion to view aboriginal rock carvings in the Manly district and French's Forest. The leader of the party was Mr. W. J. Walton, whose article, "An Old Ceremony Ground of the Cammeray Tribe," appeared in the last issue of MANKIND. About fifty persons viewed these ancient carvings.

From a large number of applicants the Australian National Research Council selected Mr. W. C. Groves to do research work in Papua and Mandated Territory of New Guinea.

Dr. and Mrs. Fortune (Dr. Margaret Mead), of the American Museum of Natural History, spent a few days in Sydney last October. They were *en route* to study the sociology of the Sepik River, New Guinea, natives.

Owing to the funds of the Society being in the old section of the Government Savings Bank, and therefore temporarily unavailable, an appeal was made to members for donations to help finance this issue of MANKIND. Thanks are due to the following donors: Dr. Raymond Firth, 10s.; Dr. Charles Anderson, 10s.; Rev. A. J. Barrett, 10s.; Messrs. R. H. Goddard, 9s.; K. M. Cobb, 10s.; P. S. Whelan, 5s.; W. J. Walton, 10s.; C. Greenwell, 10s.; F. G. Goddard, 5s.; T. H. Pincombe, 5s.; J. Powell, £1; E. O. Milne, 10s.; A. E. Ivatt, £1; K. A. Hindwood, 5s.; B. H. Whittle, 5s.; W. J. Enright, B.A., 10s. 6d.; J. C. Eldridge, M.H.R., 10s. 6d.; C. W. Heyde, 10s.; G. P. Whitley, 11s.; Mrs. F. L. Reynolds, 5s.; His Excellency Sir Philip Game, £1 1s.; His Excellency Sir J. Hubert P. Murray, £5. The cost and despatch of the special appeal were undertaken by Mr. H. J. Wright. Any subsequent donations will be acknowledged in next issue.